

**IN THE SPECIFICATION:**

Please replace the first paragraph on Page 1, with the following amended paragraph:

This application claims priority to European Application Serial No. 00402331.3, filed August 21, 2000 (TI-31366EU) and to European Application Serial No. 01400687.8, filed March 15, 2001 (TI-31354EU). US Patent Application Serial No. [ ] 09/932,651 (TI-31366US) is incorporated herein by reference.

Please replace paragraph [28] with the following amended paragraph:

[28] The hit-miss or hit-hit signal has precedence over the hit way (2-5) signals ~~524~~ 514 of the 4-way set-associative cache. This implies that any value loaded previously in the cache that should be in the RAM-set is never selected and will eventually be removed from the cache. However, data can create coherency problem in case of modified data (copy back). Therefore, it is recommended to write back ("clean") or even flush the range of address that will correspond to the RAM-set range of addresses. Other embodiments might not have such precedence defined and instead rely on cache invalidate operations to correctly prepare an address range that will be programmed to reside in a RAM-set, for example.

Please replace paragraph [80] with the following amended paragraph:

[80] A clean and flush operation is also performed using the same flow. In this case[[.]], in steps 1204 and 1214, the selected valid bit(s) and the selected dirty bit(s) are checked. If a valid bit is in a valid state, it reset to an invalid state in steps 1206, 1216. If a dirty bit is asserted, the associated segment is written to secondary memory in step 1206, 1216.

Please replace Table 2, on page 23 with the following amended table:

Table 1 – Cache and RAM Control Operations

(C: operation on the cache, RS: operation on RAM-set, R: operation on RAM)

| Function                                   |      | Software view (memory mapped/ co-proc)  |
|--|------|---|
| Flush_entry (address)                      | C/RS | Flush the entry, entry whose address matches the provided address or a Range of addresses, if End has been set previously. Flush-range instruction is made of two consecutive instructions Set_End_addr(address) + Flush_entry (address).         |
| Flush_all_entry_of_task_ID(task_ID)        | C    | Flush all entries matching to the current taskID in the cache but not in the RAM-set  |
| Flush_all_entry_of_R_ID(task_ID)           | C    | Flush all entries matching to the current R_ID in the cache but not in the RAM-set  |
| Flush_all                                  | C    | Flush all entries in the cache but not in RAM-set   |
| Flush_all_shared                           | C    | Flush all entries marked as shared  |
| Flush_all_task_ID_shared(task_ID)          | C    | Flush all entries matching the current taskID and marked as shared  |
| Flush_all_task_ID_not_shared(task_ID)      | C    | Flush all entries matching the current taskID and marked as not shared  |
| Clean_entry (address)                      | C/RS | Clean the entry, entry, whose address matches the provided address or a Range of address if End has been set previously. Clean-range instruction is made of two consecutive instructions Set_End_addr(address) + Clean_entry (address).           |
| Clean_all_entry_of_taskID(task_ID)         | C    | Clean all entries matching to the current taskID in the cache but not in the RAM-set  |
| Clean_all_entry_of_R_ID(task_ID)           | C    | Clean all entries matching to the current R_ID in the cache but not in the RAM-set  |
| Clean_all                                  | C    | Clean all entries in the cache but not in RAM-set   |
| Clean_all_shared                           | C    | Clean entries marked as shared  |
| Flush_all_task_ID_shared(task_ID)          | C    | Flush all entries matching the current taskID and marked as shared  |
| Clean_all_taskID_not_shared(task_ID)       | C    | Clean all entries matching the current taskID and marked as not shared  |
| Clean&Flush_single_entry(address)          | C/RS | Clean and flush the entry, entry, whose address matches the provided address or a Range of address if End has been set previously. Clean-range instruction is made of two consecutive instructions Set_End_addr(address) + Clean_entry (address). |
| Clean&flush_all_entry_of_taskID(task_ID)   | C    | Clean and flush all entries matching to the current taskID in the cache but not in the RAM-set  |
| Clean&flush_all_entry_of_R_ID(task_ID)     | C    | Clean and flush all entries matching to the current R_ID in the cache but not in the RAM-set  |
| Clean&flush_all                            | C    | Clean and flush all entries in the cache but not in RAM-set   |
| Clean&flush_all_shared                     | C    | Clean and flush entries marked as shared  |
| Clean&flush_all_taskID_shared(task_ID)     | C    | Clean and flush all entries matching the current taskID and marked as shared  |
| Clean&flush_all_taskID_not_shared(task_ID) | C    | Clean and flush all entries matching the current taskID and marked as not shared  |
| Set_RAM_Set_Base_addr(RAM-setID)           | RS/R | Set new RAM-set base address, set VG and clear all VI and set End to last RAM-set address by default preparing the full RAM-set loading. In that case no need to write the END address before writing the start address to load the RAM-set       |
| Set_End_Addr (address)                     | C/RS | Set end address of the next block load and set the RAM-set controller in block fill mode.   |
| Set_start_addr (address)                   | C/RS | Set start address of a block and initiates the loading of this block  |
| Prefetch-entry(address)                    | C/RS | Prefetch-the entry, whose address matches the provided address or a Range of address if End has been set previously. Prefetch-range instruction is made of two consecutive instructions Set_End_addr(address) + Prefetch_entry (address).         |
| Flush_RAM-set (RAMset_ID)                  | RS/R | Clear VG and all VI of the selected RAM-set   |